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## THE SOVIET STRATEGIC AIR AND MISSILE THREAT

- I. As a matter of priority concern to US security, intelligence community has recently completed new estimates on this general subject.
  - A. By "strategic threat" we mean Soviet capabilities for nuclear attack on:
    - l. Nuclear delivery forces, population, and industrial penters in the US.
    - 2. (S and Allied retaliatory forces at sea and in overseas areas.
  - B. These Soviet capabilities undergoing major transition.
    - Now rest primarily in long and medium range bombers
       with nuclear bombs, some with air-to-surface missiles.
    - 2. Bomber force probably now supplemented by ground-launched ballistic missiles and missile-launching submarines.
    - 3. Within next few years, ballistic missiles will become main plement in Soviet strategic threat.

Design marked by emergence of new Soviet capabilities with

ballistic missiles.

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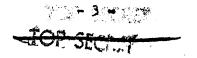
A. ICEM test-firing program proceeded in of larly manner—
while evidence still inadequate to judge precise timing,
believe that for planning purposes should consider that
by 1 January 1960, USSR had initial operational capability
with a few (say, 10) series produced TCBMs.

- 1. Soviet ICBM probably capable of carrying 6,000 pound nuclear warbead subject to variation with nosecose configuration and distance it must travel.
- 2. CEPs under operational conditions no greater than 5 n.m. initially and may be between 3 and 5 n.m. Improvement to 3 n.m. in 1963 and 2 n.m. in 1966 considered forsible.
- 3. Reliability from time ICHM placed on lambder to detention in vicinity of targets about 50 percent initially, improvable to 65-70 percent in 1963.
- 4. Air Force intelligence believes Soviet TCPM characteristics will be considerably better than this (1960: CEP 3 n.m., reliability about 55 percent; 1963: CEP 2 n.m., reliability about 80 percent).
- B. For delivery of nuclear warheads against land targets at medium ranges, USSR has had 700 n.m. ballistic missiles available for the past few years, and we believe 1,100 n.m. missiles became operational in late 1958 or early 1959.

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- 1. Estimate that both types are in series production.
- Believe troops have trained with both, and have income
  clusive evidence of deployment of 7∞ n.m. missile units.
- C. A few conventionally-powered Soviet submirines how evaluated as probably capable of launching ballistic missiles with nuclear warheads, though not from a submarged position.
  - 1. One type of modified long-range submardne can probably carry two missiles of 200 n.m. or possibly 350 n.m. range.
  - 2. A newly-constructed class which was first identified in 1959 may carry about 5 missiles of 350 news, range.
  - 3. Based on recommende and technical payablenties, estimate that in 1961-1963 USSR will first enhieve a weapon system combining a nuclear-powered submarine with a 500-1,000 n.m. ballistic missile, capable of launching from submarged position.
- III. Jet medium and heavy bomber strength of Soviet Long Range Aviation remained virtually constant over past year.
  - A. Long Range Aviation now has about 1,100 BADGER jet medium bombers (B-47 type) and about 125 BISON jet (B-52 type) and BEAR turboprop heavy bombers.
    - 1. BEAR production ceased some time ago, BADGER production ceased in about mid-1959, BISON production continues at a low rate (one to two a month in fall of 1959).



- 2. Obsolescent HVLL piston medium bombers (B=29 type)
  retired rapidly in the past year probably now
  completely phased out of Long Pange Aviation Units.
- B. Long Range Aviation remains best suited to operations against targets closer in than the US for example in Europe.

Graphic 2.

- 1. Majority of bombers are BABGERs capable of reaching most US targets only on one-way missions.
- 2. From Arctic bases, refuelled BISONs could reach US targets on two-way missions REARs could do so without refuelling.
- There are also several hundred SADGERs in Naval and Tactical Aviation, the former widely equipped with subscrize, 55 n.m. antishipping missiles.
- D. In about 1961 USSR will probably have operational a supersonic sir-launched missile of at least 350 n.m. range, adaptable for use against land targets or ships at sea.
- IV. Soviet rulers probably regard present forces as capable of inflicting appalling damage on US and Allied concentrations of population and industry, but as incapable of preventing, by military action, the nuclear devastation of the USSR.

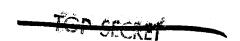
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- A. Because of US early warning and elect capabilities, Soviet rulers could not expect their bombers to reach targets in time to prevent large-scale retaliation.
- B. But Soviets probably believe present bomber force and emerging missile strength already constitutes powerful deterrent against US nuclear attack.
- C. Will seek to improve their deterrent and if possibly to change the US-Soviet power relationship to their advantage.
- V. Future growth of Soviet intercentimental striking capabilities will be primarily a function of development, production, and deployment of ICBMs.
  - A. ICBM gives USSR best prospect of being able to deliver heavy weight of attack in time to prevent launching or reduce weight of US retaliatory attacks
  - B. Soviet planners will also consider that any substantial ICBM force will have important political and psychological effects, increasing with size of the ferce.
- VI. In absence of evidence on Soviet plans and programs, intelligence community has analysed the ICBM force goals the Soviets might establish over the next few years.

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- A. Calculations were made using intelligence estimates of
  Soviet ICBN characteristics -- nuclear payload, accuracy,
  reliability, in-commission rate -- and other data from
  appropriate government agencies:
  - 1. US plans and programs for retaliatory forces.
  - 2. Nuclear seapons effects data.
  - 3. Standard probability formulas.
- B. Object of calculations was to derive theoretical Soviet requirements for ICHMs on Launcher in each succeeding year:
  - l. To give USSR high assurance of inflicting severe damage on all US retaliatory bases beyond the range of Soviet 1,100 n.m. missiles.
  - 2. To give USSR certain lesser capabilities which would still be strategically significant.
- C. Such calculations must be interpreted with caution.
  - 1. They deal only with Soviet requirements for ICEMs on launcher in the USSR -- do not constitute à net estimate of what would actually happen in the event of ware
  - 2. They include only those US targets suitable for ICBM attack (ilel, fixed installations) and exclude such US forces as airborne bombers and ships at sea.



- 3. They assume that Soviet REM force will have a maximum initial salve capability (to circumvent planned fast reaction times of US forces) and a precision of timing which is improbable in a complex operation in real life.
- in US plans and progress.
- 5. Nevertheless, believe that if the Soviets have made such calculations, the numbers arrived at would be on the same order as our calculations indicate.
- D. We then examined economic implications of Soviet ICBM pregrams which would meet various theoretical requirements.
  - Analysed physical and economic effort needed to produce sufficient missiles, build launching facilities, train units, and establish logistic support.
  - 2. Weighed potential military, political, and psychological gains to USSR against possible economic sacrifices required.
- VII. Analysis shows that in 1961 the USSR would have its most favorable opportunity, through rapid buildup in ICBMs, to gain decided military, political, and psychological advantage over the US.

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- After about that time, planned increase in semihardened and hardened UB ICBM sites would result in steep increase in Soviet ICBM requirements.
- Bo If Soviets achieved 400-500 ICBMs on launcher in mid-1961,
  - 1. Very high assurance of being able to inflict severa damage on unhardened US retaliatory bases, including bembers on the ground.
  - 2. Considerably less assurance of severely damaging such bases plus hardened retaliatory bases.
- G. Soviets would probably not regard this as "decisive military superiority" -- would still have to expect retaliation from:
  - 1. Bombers on airborne alert.
  - 2. Semihardened and hardened ICBN sites.
  - 3. Carriers and missile-launching submarines at sea.
- D. Soviets could achieve hoo-500 ICEMs en launcher in mid-1961 only through a "crash" production and deployment program.
  - 1. No indication that such a program now underway.
  - 2. Believe Soviet rulers would not make such a heavy investment in a program unlikely to be decisive.



- VIII. Present indications are that Soviet ICBM program, while not

  "a "crach" program, is designed to provide a substantial

  TORM capability at an early date.
  - A. Geel is probably a force as large as they think messary
    for substantial deterrent and pre-captive attack capability.
    - This would be consistent with Soviet military destrine, which describes pre-emptive attack as a strategy of seining initiative from an enemy who is himself preparing imminently to attack.
    - 2. Also consistent with present deliberate and orderly tempo of Soviet ICBM test firings.
    - 3. And with Soviet policy of maintaining balance among various types of military forces.
  - B. Conclusion of USIB is that present Soviet ICBM pregram

    would provide some 11:0-200 ICBMs on launcher in mid-1961.
    - 1. Such a program sould be undertaken, along with other military programs, without appreciably hindering present Soviet plans for industry and constituation.
    - 2. Even to have the ICHMs enlammeder in mid-1961 would require a vigorous progres to have 200 at that time would introduce considerably greater difficulties.
    - 3. Some difference of view in USIB within the Lightgoo

      range Army and Navy members favor life State and

      Joint Staff members favor high side Air member also

      favors high side, but should be noted that he estimates

      considerably better performance for Soviet ICBN than does

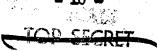
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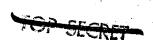
- Course of ICBM program beyond 1961 likely to be affected by changing technical capabilities in both USSE and US, and by developments in international situation.
  - 1. Any projection must be reviewed in light of the factors and of evidence on actual Seriet ICBN press
  - 2. Our present estimate of Soviet ICHEs on Launcher is some 250-350 in mid-1962 and some 350-650 in mid-1963
- Through such a buildup, USSR would progressively acquire D. the following theoretical capabilities with ICHMed

Graphie 3.

- 1. By late 1960, high assurance of being able to detonate a high-yield nuclear warhead over each of the 25 principal US metropolitan areas.
- 2. Between late 1961 and mid-1962, very high assurance of being able to inflict severe damage on SAC bomber bases, including bombers on the ground.
- 3. Between about the middle and end of 1962, very high assurance against such bases plus other unhardened retaliatory bases.
- Soviet planners would probably regard such an ICEM buildup as giving them an increasingly substantial deterrent and pre-emptive attack capability.
- Air Force intelligence disagrees with much of the feregoing analysis.

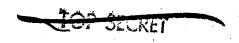


- 1. Believes Soviet leaders are attemptive to achieve capability for decision over the US through political exploitation of ICBM force or assual launching if necessary.
- 2. Assuming considerably better ICBM performance, believed
  Soviets would have higher assurance against US realistory
  forces with comparable numbers of missiles.
- 3. Believes Soviets will continue high prierity buildup over the next five years, siming at 640 ICEMs on launcher in mid-1963 and 880 in mid-1964.
- IX. USSR should have no serious difficulty in producing and deploying sufficient medium range missiles to attack US and Allied nuclear delivery bases overseas.
  - A. We estimate they will have total of about 250 700 n.m. and l,100 n.m. wissiles on launcher from 1961 through 1961.
  - B. They would probably build toward considerably larger stockpile of these missiles, for use subsequent to an initial blow.
- Graphic he Even from within USSR, those missiles could deliver nuclear Graphic he warheads against large majority of critical Western targets in Europe and Asia.



- I. Could Spylet bester strongth will probably remain relatively securities for many year or was, and dealine the reactor.
  - A. Bester's will continue to be weefil even after femidable missile sepabilities acquired.
    - L. Indispenseble for specialized histians such as attack
      on targets of uncortain leastion.
      - 2. Capable of searching out and attacking carriers at sea.
      - B. More advanced bombers may appear in the next few years, but current models will continue to ferm backbone of Soviet bomber force.
      - Go Probable Seviet advances in air-to-surface missiles will give bombers a stand-off espability against land targets and improve their performance against shipping.
- II. USER's missile submarines could hunch muclear warheads against selected targets in the US, although Soviet planning apparently does not accord them the main weight of an attack.

  Graphic 5.
  - A. Maximum wissile range estimated at 200-350 n.m. at present, will probably be 500-1,000 n.m. beginning in 1961-1963.
  - B. Present strength, estimated at about 10 conventionally-powered missile subs, will probably double by 1961-1962.



- O. Reclear provered sizelle subs will constitute a staniae chil
  - l. Assuming an active program which brings this type into carvice in 1961, believe USSE will have about 14 in operation in 196k.
  - 2. With proper operating procedures and alternate grave,
    perhaps half this number could be deployed off US
    coasts at all times.

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Graphic &. Maximum range capabilities of BADGER and BISCH against the US (S.)

Oraphie 3. Estimated Soviet ICEM progress versus salested on-launched requirements (2.5.)

Oraphic he Maximum range espabilities of Soviet 700 and 1,100 mome bellistic mismiles against Europe and Asia (8.)

Graphic 5. Maximum range capabilities of Soviet sub-launched missiles against the US (8.)